Revision 1

#3760 Store at -20C

Phospho-IP3 Receptor (Ser1756) Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	320	Rabbit	#Q14643	3708

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Phospho-IP3 Receptor (Ser1756) Antibody detects endogenous levels of IP3 Receptor only when phosphorylated at Ser1756.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser1756 of rat IP3 receptor. Antibodies are purified by peptide affinity chromatography.

Background

Inositol 1,4,5-triphosphate receptor, also known as IP3R or InsP3R, is a member of the intracellular calcium release channel family and is located in the endoplasmic reticulum. IP3R functions as a Ca2+ release channel for intracellular stores of calcium ions. There are three types of IP3 receptors (IP3R1, 2, and 3) that require the second messenger inositol 1,4,5-triphosphate (IP3) for activation (1). Four individual subunits homo- or hetero-oligomerize to form the receptor's functional channel (2). Phosphorylation of IP3R1 at Ser1756 by cyclic AMP-dependent protein kinase A (PKA) regulates the sensitivity of IP3R1 to IP3 and may be a mode of regulation for Ca2+ release (3,4). IP3R1-mediated Ca2+ release appears to have an effect on the induction of long term depression (LTD) in Purkinje cells (5).

Background References

1. Joseph, S.K. (1996) *Cell Signal* 8, 1-7.
2. Galvan, D.L. et al. (1999) *J Biol Chem* 274, 29483-92.
3. Haug, L.S. et al. (1999) *J Biol Chem* 274, 7467-73.
4. DeSouza, N. et al. (2002) *J Biol Chem* 277, 39397-400.
5. Inoue, T. et al. (1998) *J Neurosci* 18, 5366-73.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses